DOCUMENT RESUME

ED 095 896 IR 001 078

AUTHOR	Campbell, Vincent N.
TITLE	The Televote System for Civic Communication: First Demonstration and Evaluation. Final Report.
INSTITUTION	American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif.
SPONS AGENCY	National Science Foundation, Washington, D.C. RANN Program.
REPORT NO	AIR-38700-9/74-FR
PUB DATE	Sep 74
NOTE	57p.; For related document see the Appendices IR 001 079
EDRS PRICE	MF-$0.75 HC-$3.15 PLUS POSTAGE
DESCRIPTORS	*Citizen Participation; Cost Effectiveness; Demonstration Projects; Feedback; *Local Issues; *Parent School Relationship; Program Descriptions; Program Evaluation; *Public Opinion; Public Schools; Surveys; Telecommunication; *Telephone Communication Systems; Voting
IDENTIFIERS	San Jose Unified School District; Televoting

ABSTRACT

A televote system to aid two-way communication between public officials and constituents was developed and demonstrated in the San Jose Unified School District. The objectives of the system are: (1) to provide citizens and public officials information on community problems; (2) to provide civic planners knowledge of the views of citizens so their decisions will be responsive to these views; and (3) to offer citizens effective roles in civic and school planning. Over 5,000 persons (4 percent of the eligible population) voluntarily registered as televoters, and most participated in one or more televotes. About 700 persons voted on each issue which represents a substantially greater input than school authorities usually receive on specific issues. An evaluation of the system at the end of the demonstration gave consistently favorable responses. It appears that the citizens are willing to pay the cost of operating the televote system. It is recommended that: (1) the system should continue to be developed and operated to jointly serve those public agencies which wish to cooperate in its use; (2) outside funds should be sought to support the improvements in the system; and (3) the telephone company should be requested to approve a unique prefix so that televotes may be dialed from all phones in the area. (WCM)

AIR-38700-9/74-FR

THE TELEVOTE SYSTEM FOR CIVIC COMMUNICATION: FIRST DEMONSTRATION AND EVALUATION

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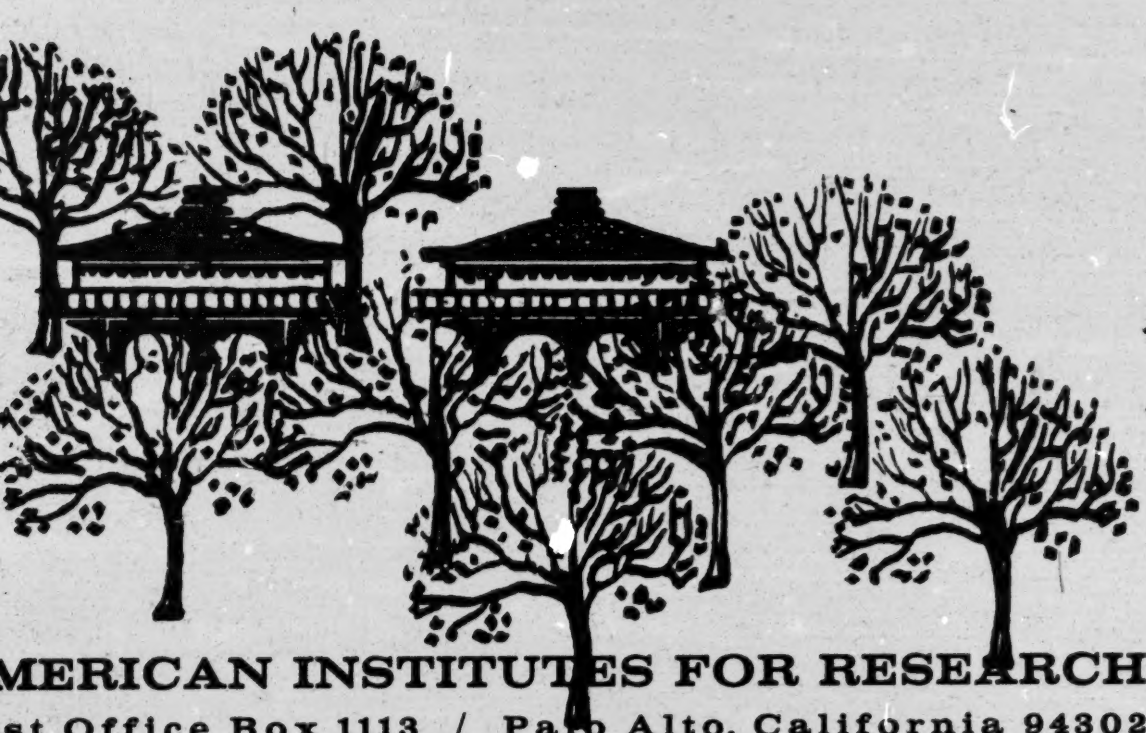
Vincent N. Campbell

September 1974

Final Report Submitted to National Science Foundation
Research Applied to National Needs (RANN)



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SOCIAL AND EDUCATIONAL RESEARCH PROGRAM

ED 095896

THE TELEVOTE SYSTEM FOR CIVIC COMMUNICATION: FIRST DEMONSTRATION AND EVALUATION

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September 1974

Final Report submitted to National Science Foundation
under Grant No. GI-37183. Monitor: Allen M. Shinn

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SUMMARY

A televote system to aid rapid two-way communication between public officials and large numbers of constituents was developed and demonstrated in the San Jose Unified School District (SJUSD). The objectives of the system are (1) to provide citizens and public officials the most relevant information bearing on important community problems, (2) to provide civic planners accurate knowledge of the current views of citizens so that their decisions will be more responsive to these views, and (3) to offer citizens effective roles in civic and school planning suited to different levels of interest in a given issue.

In a typical televote, statements of opposing views are sent to registered televoters, who then have a week to feed back their own preferences by dialing certain numbers on the telephone. Results showing the number of people preferring each view can be in the hands of planners within two days after the televote ends. Use of the system can help a public agency serve its functions better by bringing the many people affected by agency decisions into the planning process at very low cost in time and money.

After initial development and a pilot study to test equipment and procedures, a district-wide public demonstration of the televote system was conducted for seven months during the 1973-74 school year. A committee representing students, school staff, parents and other citizens met weekly to decide on which issues communication was most needed. When the committee was satisfied that all sides of the issue were stated well and fairly, the issues were mailed to all televoters and published in the SUN newspapers.

In order to become televoters, citizens were required to register by phone or mail and were sent a unique televoter number as a way of insuring that only one vote from each person was counted. Registrations were solicited mainly through school newsletters and occasional public service announcements on radio and TV.

Nine televotes were conducted during the demonstration, including 30 specific questions. A three-digit number was printed beside each alternative answer,

plan or policy. A televoter studied the alternatives, then indicated his preference by calling the televote line, dialing his own televoter number, and dialing the numbers of the answers he preferred. Televotes were processed by computer and all information from an individual was kept confidential. Televote counts broken down by demographic variables were published and distributed to all interested individuals and groups, and to the media.

Evaluation Results

Televote results have so far had significant impact on four educational decisions. The one of greatest consequence was the choice of new courses for a $3 million program addition to the Regional Vocational Center. The courses chosen corresponded closely to the preferences of televoters. The televote issues which had tangible impact were in most cases those issues initiated and defined by the same school officials who used the results in their planning.

Over 5,500 persons (about 4% of the eligible population) voluntarily registered as televoters, and most of these participated in one or more televotes. An average of about 700 persons voted on a given issue. This rate of participation represents substantially greater input than school authorities usually receive on specific issues, except in public elections. Participation was higher in the suburban areas than in the central city areas where the less affluent residents live. The largest minority group in the area is Mexican-American and they participated at a lower rate than Anglo Whites. Information was provided in both English and Spanish to this group.

Measures of basic attitudes and habits of communication with schools were administered before and after the demonstration in a design which permitted comparison of changes in SJUSD to changes in a comparable control district nearby. In the suburban areas of SJUSD there was a marked increase in perceived interest of the school in citizen opinions, an increase not found in comparable suburbs of the control district. Also, over 85% of both students and adults felt the school district should ask for their opinions before making policy decisions. Televoters and other citizens in SJUSD showed a greater

increase in awareness of school issues during the demonstration year than did citizens in the control district. From these results it appears that participation in the televote system led to greater awareness of school issues and better relations between citizens and the school district.

Equipment was invented to decode dial and touch tone signals and record them on paper tape for later processing by computer. Two major mechanical problems were encountered in using this equipment. One was caused by a new type of telephone office recently introduced; negotiations with the telephone company to adopt a feasible solution to this problem are underway. The second problem was in our own decoding apparatus and caused errors in about 10% to 15% of the televotes on the average. This problem has since been eliminated by a modification of the apparatus.

All groups questioned about the value of televoting, including selected staff members, student and adult televoters, and a random sample of non-participating adult citizens, evaluated the system favorably on the whole. Each group also offered many specific criticisms. Asked how much they would be willing to pay per year to have a multi-agency system continue in San Jose, half of the random sample of San Jose citizens said they would be willing to pay at least 25¢ per year, which is the estimated tax or subsidy needed to operate a televote system. The mean amount of money respondents were willing to pay was 62¢. Televoters responded with a mean value of $1.07. Apparently most residents who are told even briefly how televoting works think it has potential value for the community and are willing to pay the small cost of operation.

In addition to this report, a separate handbook on how to introduce a televote system in a community, Guidelines for a Televote System, is being prepared for distribution in November, 1974.

ACKNOWLEDGEMENTS

The San Jose Unified School District is the first institution to try the televote system, and their cooperation in this pioneering experiment has been a key factor in its success. Their participation was initiated by Charles Knight, Superintendent, and project activities were ably coordinated by Gerald Weltzin, Public Information Officer. Among the many San Jose Unified School District staff and citizens who contributed actively to the operation of the system, the pilot study and demonstration Agenda Committee members listed below deserve special mention for producing clear, well balanced statements of a variety of televote issues:

School Board: Elizabeth J. Allen, Mary McCreath, Neil Geier.

District and school staff: Ed Barrows, Stanley Bastian, Robert Beck, Wallace Berry, James Cole, Michael Hicks, Charles Haskins, Marilyn Johnson, Martin Mullins, Mrs. Jean Smith, Mrs. Joyce Strong, Daniel J. Walker, Gerald Weltzin.

Students: Grace Cavazos, Scott Davis, Chris Hamamura, Marcia Hadley, Ann Hawkins, Norman Klein, Jan Martin, John Martinez, Jackie Metzger, Jennie Romero, Ed Souza, Carolyn Stager, Mark Teren.

Parents and other citizens: Mrs. Judy Davis, Rachael Doughty, Nicholas Gonzales, Joyce Honeychurch, Jerry Houseman, Frances Johns, Patrick Koeplin, Joanne Kneer, Richard Mitchell, David Runyan, Nancy Spinelli.

Cooperation of the following additional teachers in various efforts to involve students in defining issues and publicizing the system were very much appreciated: Sal Basquez, Mrs. Goodrich, Ray Lopp.

The East Side Union High School District, Frank Fiscalini, Superintendent, provided a very valuable service to the project in serving as the control district for evaluation of the impact of the televote system. Their participation was quite effectively coordinated by Dr. William Baker, Deputy Superintendent.

Keeping daily records of communications was a burdensome task for which we are deeply indebted to the following school personnel not mentioned above:

SJUSD: Helen Fairfield, Carol Hock, Fleur Kettman, Donald Lucas, Robert McPeek, Ralph Sleight, Gloria Volpe, Jean Yonemura;

East Side: Valerie Anderson, William Bare, Tony Butcher, Diane Caine, Thomas Collins, Gene Defelipis, Marcia Griffin, Mary Hankins, John Hernandez, Mrs. Hopper, Virginia Maldonado, Linda Marquez, Nancy O'Kane, Milton Pavlina, John Sellarole, Arlene Slindledecker, Mary Sturver, William Sullivan, Mrs. Taketa, P. Worshaim.

Credit for design of the televote processing equipment goes to Tod Morcott, consulting engineer. Cable TV programs on televoting were stimulated and facilitated by Barry Verdi, Public Access Director for Gill Cable TV.

AIR staff members Sue Brifman, Alice Cherveny, Bill Clemans, Bruce Everett and Tim Nicholson also provided valuable technical or administrative support. Consultants contributing to the project were Hans Weiler, Colin Mick, William Paisley, W. R. Kinchelow and D. A. Dunn. Translators were Roberto DeVillar and Josefina Herrero.

BACKGROUND

In this country it is generally agreed that the main purpose of our governments should be to serve the needs of all the people. There are wide differences in political philosophy, however, regarding how government can best serve public needs. A major dimension of these differences concerns the extent to which citizens should actively participate in government decisions. At one pole elitists, in the tradition of Plato and Edmund Burke,[1,2] would involve the public as little as possible. At the opposite pole democratists would give the public maximum direct control, not only in choosing leaders but also in substantive decisions.[3,4] An important intermediate stance is that of the pluralists,[5] who contend that citizen views are represented through the competing interest groups and parties which influence decision-makers. However, there is a sizable proportion of citizens who do not belong to any voluntary association and hence are not clearly represented by any interest group. This unaffiliated percentage of the citizenry has been variously estimated from studies to be 36% to 65% of the populace.[6]

During recent centuries democratism has gradually gained in worldwide popularity as education and technology have given increasing numbers of people the motives and means to demand more from their governments. The proportion of citizens actively involved is still small,[7] but the trend toward greater citizen involvement is clear, and it is probably more advanced in the U.S. than in any other country. In the past 15 years there has been an especially rapid increase in participation by the young and minorities. Effective use of power to achieve social change is the prominent theme, and their methods of participation have become far more diverse and pragmatic than traditional models of citizenship.[8,9,10]

The research reported here is part of a programmatic effort to identify and implement effective methods of citizen participation. Accurate timely communication between citizens and public officials about issues of mutual concern is one means of making public decisions responsive to public needs. Yet communication efforts often go awry. The challenge

is to determine which types and conditions of communication benefit society and which do not. This research sought to develop, demonstrate and evaluate a civic communication system which encourages beneficial communication.

From the start we assumed that a piecemeal approach in which communication factors were varied one at a time would take too long and have little impact. Instead we sought to combine several promising conditions into a system which would complement traditional modes of communication and fulfill communication needs which traditional modes do not.

The "televote" system so designed had the following objectives:

1. To provide civic planners accurate information on the current views of citizens so that they may formulate and reshape proposed plans in light of this information, and thereby make decisions likely to win acceptance and support of the community.

2. To provide citizens and public authorities ready access to well organized, relevant information about important community problems, so that their judgments may be well informed.

3. To offer citizens several different kinds of constructive participation in civic planning, suited to different degrees of involvement in a given issue.

Design of the system was based on the premise that the following conditions tend to promote effective communication and thereby improve the quality and acceptance of public decisions:

1. Public attention is focused on constructive alternative actions to achieve public goals, rather than on intergroup hostilities.

2. Modes of citizen participation are adapted to their function in civic decision-making. Specifically, individual effort and systematic search of information sources are probably best for generating ideas and plans, and obtaining relevant

facts;[11] discussion in a heterogeneous group probably serves best to clarify the main pros and cons from differing social perspectives; and anonymous voting may be the most unbiased way to assess public preferences among clearly defined alternatives.

3. Communication occurs early enough in planning that citizen views can be weighed before officials are committed to a course of action.

4. Citizens who participate are informed of at least the basic alternative positions and supporting reasons for each; they consider these in forming and communicating their own views.

5. Participation is convenient enough for most citizens so that it does not interfere with pursuit of stronger personal interests.

6. Citizens expect their views to have impact on public decisions and public authorities do in fact weigh citizen views seriously.[12,13]

7. Citizens find participation itself rewarding for any of several reasons including: the sense of belonging to a community and contributing to its welfare; affirmation of belief in democracy; expression of personal feelings about issues; exercise of political power; achievement of desired governmental policies and actions.

Verba[14] has discussed conditions for effective citizen participation in greater depth, and the above conditions for effective communication are generally consistent with his.

The basic workings of the televote system are:

1. Public officials define issues on which communication is needed and state supporting reasons for plans or positions. Other citizens may also initiate issues.

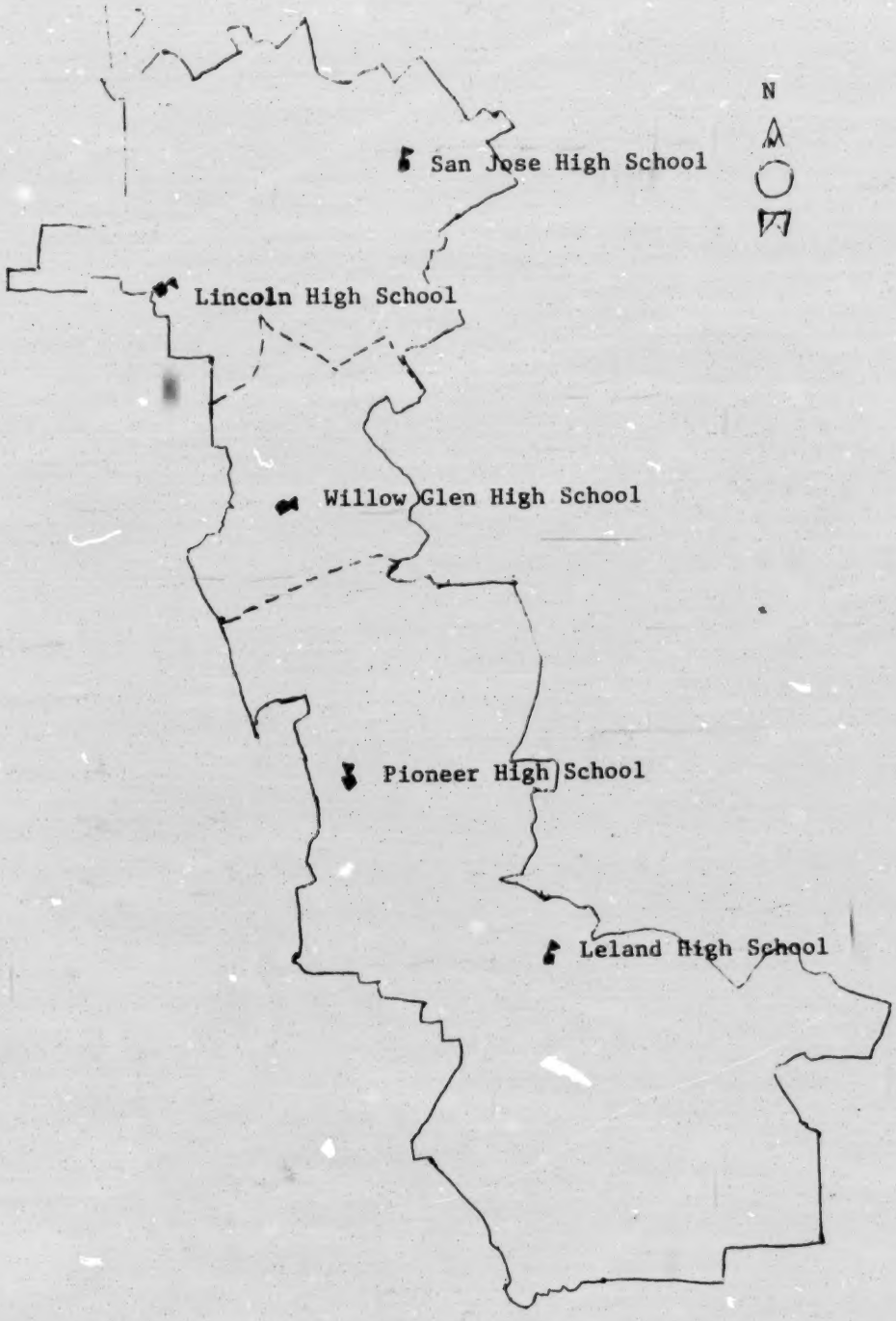
2. All interested citizens in the community receive this information in their homes and feed back their preferences among alternatives simply by dialing certain digits on the telephone (televoting). Dialed inputs are processed and counted automatically.

3. The results are immediately fed back to public officials who may use the information to revise their plans so as to make them more responsive to the constituencies they serve. Televote results and their impact on public planning are publicized to reinforce citizen involvement.

The setting chosen for the initial demonstration of the system was a moderately large school district (35,000 students) in the heart of San Jose, California, at the south end of the San Francisco Bay. The San Jose Unified School District (SJUSD) agreed to try televoting as part of its continuing effort to find better ways of keeping in close touch with the citizens they serve. They were chosen over two other equally cooperative districts because SJUSD includes a more diverse socio-economic population which would provide a greater challenge and test of system effectiveness. A wide variety of ethnic groups live in San Jose, the two most populous being "Anglo-White" (70%) and Mexican-American (25%).

The geographic shape of SJUSD is elongated (see map on next page) with the north end comprising most of the central city area and some moderately affluent suburbs just west of downtown. The south end is almost entirely newer suburbs housing middle to upper income Anglo-White families. The middle area, served by Willow Glen High School, is also midway between the central city and the southern suburbs on most socio-economic indices.

A city would have been an equally appropriate governmental unit for tryout of the televote system. The strong interest shown immediately by school superintendents was the primary factor in choice of an initial demonstration setting. Perhaps schools are at this time experiencing more sudden increases in citizen involvement and public demand for accountability than are municipal governments. Certainly there are many American communities



San Jose Unified School District. Dashed lines show Willow Glen area where pilot study was conducted.

in which organized citizen involvement in education has recently arisen.[15] Public schools are among the institutions of government most active in searching for ways to establish better communication with their constituencies. The search is well motivated, for the current gap between school and community is so wide that a high proportion of school bond issues are failing. The educational crisis no doubt has other causes as well, but the lack of two-way communication between citizens and schools appears to be central.[16,17,18,19]

Nationwide studies of communication between citizens and their schools, indicate that at least half the citizens believe they can understand the issues,[20] about 70% of the citizens believe that school officials care what people think, and innovations in community relations are generally well received.[21] The majority would like to have more information from schools but don't know how to get it.[21,22]

Until recently students have typically been overlooked as participants in educational planning. According to a recent survey of 146 schools across the nation[23] most school boards are now seeking better ways to involve students in communication about school decisions. A 1970 survey[24] in Ohio revealed that 90% of the students there wanted to be involved in decisions that affect them. The televote system demonstrated in San Jose invited all citizens over age 12 to join in constructive communication and thereby put high school and junior high students on an equal footing with adults.

DEVELOPMENT AND DEMONSTRATION OF THE TELEVOTE SYSTEM

Description of the System

The course of development and evaluation of the system may be more meaningful to the reader if we first describe the televote system functioning as intended during the public demonstration in SJUSD. Each major component of the operational system is described below.

Defining issues. An Agenda Committee representing students, school officials, parents and other citizens met weekly to select and define televote issues. In some cases televote issues were initiated by school or district level officials who sought information on citizen views as inputs to making specific plans and decisions that were part of their regular responsibilities. The officials would attend Committee meetings to discuss the issue and what background information was needed, and Committee members or AIR support staff sometimes made one or two visits to the official to get further clarification of the issue.

Other televote issues originated with Committee members themselves, often on the basis of conversations with other students, staff or citizens. In these cases a subcommittee did the necessary background research and drafted statements of the issue for Committee review, occasionally with the aid of a task force of volunteer students and staff who participated only on that issue and were not regular Committee members.

At least one televote issue (School Hours and Daylight Savings Time) was first initiated by a parent who called the 24-hour "hotline" to suggest this issue. The hotline was also used as a central information resource for anyone wishing to inquire about the televote system, obtain more detailed information about issues, or describe other alternative answers which the caller preferred to any of the alternatives provided. Typically an issue was initiated at least a month before its scheduled televote. Drafts in various stages of completion were usually reviewed by the Committee at least twice before final acceptance. Committee deliberations were informal and decisions were reached by consensus in nearly all cases. In only one instance was a formal vote taken. Hotline suggestions for new issues were accumulated and occasionally the list of

suggestions was presented to the Committee.

The system is intended to permit a sequence of related televotes on the same issue in which early televotes are used as a basis for modifying the alternatives for later televotes, but the demonstration was too brief to realize this capability. The need was partially met by asking a series of related questions on the same televote agenda, which happened several times. But in the fourth month of the seven-month demonstration all televote issues had been selected for the remainder of the demonstration and opportunities for follow-up televotes were preempted.

Probably the most critical function of the Committee is to insure that all sides of each issue are stated well and fairly, so that citizens' judgments are informed from all major perspectives. Where an issue asks televoters to choose among alternative courses of action, it is therefore important that the main reasons supporting each alternative plan be presented and documenting facts supplied where needed. Some issues were investigated in substantial depth. In most cases even more background research would have been useful both to citizens and officials had more time and money been available. Apparently the Committee did succeed in presenting the major viewpoints and supporting arguments fairly. Complaints of bias in the final issue statements were almost nonexistent.

Appendix A contains the complete statements of basic information provided to all televoters on all televote issues during the seven-month district-wide demonstration of the system. It also presents televote results on these issues. One of the shorter issues and the televote results are shown on the next page as an illustration. The 3-digit number beside each answer is the number a televoter dialed to convey his choice of that answer.

Informing the community. Many social scientists would predict that widespread citizen participation without better information would reduce rather than enhance the quality of civic decisions.[24,25,26] However, there have been very few systematic efforts to give citizens ready access to relevant information on the issues at hand, and these

Televote issues for Apr. 10 - Apr. 22

SCHOOL HOURS

To make suggestions or for information, call 998-2668

Next school year California is expected to be on Daylight Saving Time (DST) throughout the winter again. Last winter some schools started later than usual so it would be light when students were walking to school or to the bus. With DST the sun will rise after 7:30 from Oct. 28 to Mar. 9 with the latest sunrise being at 8:28, Jan. 6. The earliest sunset will be at 5:50 p.m. (Dec. 9). On a clear day there is good visibility from 1/2 hour before sunrise to 1/2 hour after sunset. If we stay on DST, which time would you prefer single-session schools* to begin in your area next year? (Choose one answer in each column.)

Grades K-6		Grades 7-12	
114	8:00 a.m. all year	558	8:00 a.m. all year
225	8:45 a.m. all year	669	8:45 a.m. all year
336	8:45 in winter, 8:00 in fall and spring	771	8:45 in winter, 8:00 in fall and spring
447	Other	882	Other

*This question does not answer problems caused by a double session schedule.

WHEN YOU HAVE CHOSEN YOUR ANSWERS, PLEASE TELEVOTE THEM TO US AS EXPLAINED ON YOUR TELEVOTER CARD. (If you need a card, call 998-2668.)

RESULTS

Televoter preferences as to school hours next winter differed markedly for the elementary and secondary levels. At the elementary level there was a strong preference for the later starting hour (56% for 8:45 a.m. vs. 10% for 8:00 a.m.), and this was fairly consistent across all groups. At the secondary level opinion was more evenly divided, with 35% favoring 8:00 a.m. and 32% 8:45 a.m. However there was dramatic disagreement between students and parents at the secondary level. High school students preferred the earlier starting hour by 62% to 14%, while parents preferred the later hour by 36% to 22%.

School Starting Time	Totals		Sex		Ethnic Group			High School Area					School Affiliation					
(Grades K-6)	Met. area	SJ-USD	M	F	LA	Ang.	All Oth.	Le-land	Lin-coln	Pio-neer	San Jose	Wil. Glen	Elem. Par.	Oth. Par.	Non Par.	Jr. Hi.	H.S.	Staff
8:00	10%	10%	11%	10%	17%	9%	18%	15%	22%	12%	3%	4%	8%	14%	13%	11%	12%	4%
8:45	56%	56%	52%	58%	48%	57%	38%	54%	51%	60%	46%	56%	62%	62%	57%	34%	42%	50%
Season*	17%	17%	18%	16%	17%	17%	18%	19%	20%	12%	20%	16%	16%	11%	13%	20%	21%	33%
Other	2%	2%	1%	2%	4%	2%	3%	3%	2%	0%	6%	2%	1%	3%	0%	4%	0%	4%
(Grades 7-12)																		
8:00	35%	35%	38%	34%	35%	36%	32%	45%	45%	26%	17%	37%	32%	22%	50%	35%	62%	50%
8:45	32%	32%	32%	31%	39%	32%	21%	26%	31%	38%	34%	29%	38%	36%	33%	23%	14%	13%
Season*	18%	17%	16%	19%	9%	17%	32%	19%	20%	16%	11%	18%	15%	20%	13%	24%	15%	25%
Other	2%	2%	1%	2%	4%	1%	3%	0%	0%	2%	9%	2%	2%	0%	0%	4%	2%	0%

*8:45 in winter, 8:00 in fall and spring

About 85% of the 641 televoters participating this time voted on the school hours issue. In addition three high school areas each voted on an issue distinctive to their own area.

few are almost entirely attributable to volunteer groups such as the League of Women Voters. Information provided by the news media is designed to catch the attention of a wide audience, not to answer the specific needs of a given citizen for information on a particular question of interest to him.

An essential part of the televote system was to give citizens easy access to the information relevant to televote issues. The issue statements and supporting reasons approved generally constituted one or two pages of printed information which was mailed to every televoter. Mexican-Americans were sent all issues in both English and Spanish. In addition the SUN newspapers in the San Jose area printed all televote issues on the front page of their advertising section which is distributed free to approximately one-third of the households in the area served by SJUSD. Televote results were summarized in the news section of the SUN, which a smaller proportion of the same population receive on a subscription basis.

In addition to the printed media, cable television programs were presented several times during the demonstration. A program typically ran for 30 minutes and focused mainly on the current issue after a brief description of the televote system. The program was presented several times during a given televote interval (1 to 2 weeks) though the number of viewers was probably less than 200 since cable television is not yet installed in most of the homes in the district. The programs were presented on the public access channel (8B) of the local cable operator (Gill Cable TV). The fact that participation in televoting was higher in the area served by cable television may be attributable to these programs or to the fact that civic participation of all kinds is typically higher in the suburbs than in the central city; or both factors may have contributed.

For some issues additional more detailed information was kept on hand by the hotline operator in order to answer inquiries. Questions not answered by such information were referred to the school official most directly responsible for dealing with that issue.

The major challenge in informing the community is the initial task of making them aware of what the televote system can do for them and how to use it. The steps we took to launch the system into the sea of public awareness are described later. Those who responded to initial announcements about the televote system had to register in order to televote. Registration is the only way we can be sure we count only one vote from each person. The registration forms (Appendix B) were brief and took only a minute or two to complete. Once registered a person was automatically on the mailing list for all subsequent televote issues during the demonstration.

Televotes. After registering, the televoter received in the mail a televoter card with instructions as to how to televote and a copy of the information taken from his registration form for him to confirm. On the televoter card there was a six-digit televoter number which was unique for each televoter and which he dialed before dialing his answer numbers. These numbers were assigned randomly by computer from the total possible set of 899,999 six-digit numbers not beginning with zero. This procedure whereby fewer than 1% of the six-digit numbers chosen at random would happen to be actual televoter numbers was designed to discourage attempts to "steal" other people's televotes by random dialing of numbers. Apparently it accomplished this in that we found no evidence of such attempts. The two sides of a televoter card are shown on the following page. As noted on the televoter card our equipment could not record dialed televotes from certain prefixes which comprised about 20% of the telephones in the area. Televoters using such phones gave their televotes by voice, as explained in Appendix C.

After a televoter received information on the current issues he had several days in which to televote his responses before the announced closing date. During televotes an operator answered the hotlines on weekdays for approximately an 8-hour interval and an automatic answering service was connected for the remaining hours including weekends and nights. This allowed televoters to leave their televote and any other message at any time they called.

To televote: First study the information and choose your answers. Then call 998-1166 . As soon as the tone begins, dial your televoter number (below), then dial your answer numbers. The tone should return after each number dialed.

YOUR TELEVOTER NUMBER IS

BUT NOTE: Our equipment cannot yet record dialed televotes from dial phones with these prefixes: 268, 277, 279, 923, 926, 997, 998. (Touch tone phones work OK with any prefix.) To televote from a dial phone with one of the above prefixes, please call 998-2668 and we will enter your televote for you.

(To televote, see instructions on reverse side)

If you have questions or suggestions, or have trouble dialing your televote, call 998-2668

Your televoter number is recorded in only two places: on this card and in a confidential computer file. If you lose your televoter number card, or someone else has seen your number and may be using it, we will be glad to mail you a new number. Call 998-2668.

NAME _____

(please keep this card for future televotes

Televoters who knew they made errors in dialing or changed their minds about their answers could hang up and repeat their televote immediately or at a later time. The computer program for counting televotes first collected televotes with the same televoter number and eliminated duplicate information, retaining the last answer numbers dialed. The program then compared televoter numbers through a stored list of valid televoter numbers and eliminated votes where the number did not match. Finally the number of televotes for each answer was counted and votes were broken down by demographic categories according to information obtained from televoter registration.

Use of televote results. Televotes counts were completed and available to school officials within two or three days after the close of each televote. The results were mailed to interested officials, Committee

members, student and parent organizations, the news media, and were included in the printed information sent to all televoters on the subsequent televote agenda, usually about a week later.

Results were discussed by staff in informal planning sessions and in some instances were used as a direct basis for specific decisions in program planning. Many issues had no apparent immediate impact other than simply being noted. Delayed effects caused by changing the beliefs of planners or by later interactions among officials and citizens are likely but have not been assessed.

When officials did take action related to televote results, these too were publicized. The purpose of this is to heighten the consciousness of both authorities and citizens that each cares what the other is doing and both are focusing on the same public issues. Participation by citizens may be reinforced by seeing the results and their impact on decisions. Authorities may be rewarded for responsive decision-making by increased public support. It should be noted that the system does not seek automatic conformity by authorities to majority opinion. When authorities disagree with the majority, the system is intended to stimulate authorities to explain to the public why their decisions serve the public interest. If they have no convincing reasons, perhaps it is better that they do accede to the majority.

Pilot Study

After three months of initial planning and development, the pilot tryout of the main elements of the televote system was conducted from April to June 1973 using a small sample of citizens, students and staff in the Willow Glen High School area. A pilot agenda committee from the Willow Glen area helped plan the tryout as well as selecting and defining several televote issues.

In the initial meetings one social studies teacher expressed concern that work of the agenda committee might be frustrated if top district or school authorities vetoed issues which were developed because of their controversial nature. At the next meeting of the committee the

superintendent and the high school principal attended and assured the committee that whatever issues were chosen by the committee to be important matters of concern to the educational community would indeed be permitted as televote issues in both the pilot study and the public demonstration.

Televoters for the pilot study were drawn from three sources: the Dads Club (a parent-school organization); a random sample of 170 adult citizens from the Willow Glen area; and other interested staff, students and citizens who volunteered to take part. A letter was sent to each of 534 persons invited to participate explaining the purpose and including instructions on how to televote along with the current televote issue. In all, 25% responded by televoting on one or more issues. The participation rate was substantially higher among Dads Club members (38%) than among randomly chosen adults (9%).

Background information on each issue varied from one-half page to five pages. The pilot study issues dealt with student smoking, which taxes should pay for education, street expansion in the Willow Glen area, career education, and priority emphases for the social studies.

A single prototype device for decoding dialed and touchtone signals from the incoming telephone line was used for the pilot study and functioned well. Since computer programs to count votes were not ready until near the end of the pilot study, pilot televoters were sent summaries of the results for all issues at once at the end of the pilot study.

Launching the Public Demonstration

During the summer of 1973 the system was revised and preparations were made for the district-wide public demonstration of the televote system. From September 10th to October 10th there was an intensive effort to disseminate information on the televote system to as many parents, students, staff, and other residents of the district as was possible using low-cost methods. The basic mode of dissemination was a one-page summary description of the system with a form on the back to be completed by those who wished to register to televote (see Appendix B). The form

was mailed in by the registrant or sent to the nearest school, or the registrant called his information into the hotline.

The project was not budgeted for buying time on the mass media, but the start of the televote system was publicized to some extent through news and public service announcements. KNTV, the largest local non-network T.V. station ran a news item on televoting during the start-up period and in addition ran a one-minute free speech message repeatedly throughout the demonstration during the late evening and night hours. Several radio stations also ran 10- to 30-second spot radio announcements during the start-up month. The San Jose News ran a banner article on televoting a month prior to start-up, and the SUN newspapers printed both a start-up article and all agendas and results as noted earlier. In some high schools the student newspapers ran a brief announcement or news item on televoting, as did the San Jose State University daily paper, the Spartan.

The first televote began October 19, with a total registration of over 3,000 citizens, students and staff. By November 1, the cut-off date for the second agenda mailing, the total number of registrants was 4,600. We had anticipated that a sizeable proportion of registrations might come via the hotline and had recruited several hotline operators and installed six telephone lines for this purpose. As it turned out fewer than 3% of the registrations came by telephone. About 60% came by mail, about 35% by the inter-school delivery system and the remaining 2% were collected at 16 parent organization meetings at which brief televoting presentations were made during the first three months of the demonstration.

Equipment and Data Processing

The televote hotlines and automatic data collection equipment were housed in a room in a school from which students had been vacated because of earthquake hazard. Dial and touchtone signals from incoming telephone lines were decoded into digital form and stored momentarily by electronic apparatus invented especially for the purpose. When several televotes had been accumulated by this apparatus the information was "dumped" onto paper tape through a teletype machine. After the close of a televote, voice televotes were also entered onto paper tape and all tapes were

entered remotely (via teletype) into a central computer and batch processed.

Until the demonstration began we had no dependable basis for predicting the volume of citizen participation. Therefore equipment development was planned for two different contingencies:

1. If participation on each televote was less than about 1,500 persons, the prototype apparatus used in the pilot study would suffice for the demonstration if at least 2 devices were available. (One is needed on each incoming line.)

2. If participation reached several thousand on a given televote the system would operate much more efficiently if the decoded signals were dumped onto magnetic tape rather than paper tape.

During the start-up phase the consulting engineer, Tod Morcott, therefore developed detailed plans and equipment specifications for the second contingency while setting up the pilot equipment to use during the first televote or two. The volume of participation was never high enough during the demonstration to require conversion to a magnetic tape system. Further details on televote equipment appear in Appendix C.

EVALUATION OF THE SYSTEM

The televote system was evaluated on several dimensions by a variety of methods. The four main dimensions of evaluation were:

1. Use of televotes in educational decisions
2. Rate of participation in televoting and citizen involvement in the system
3. Changes in basic citizen attitudes and behavior regarding communication
4. Direct evaluation of the strengths, weaknesses and overall worth of the televote system by its users and potential users.

Each of these four major dimensions will be taken up separately. Instruments and data collection procedures for the latter two dimensions were rather complex and are only summarized briefly in this section. Appendices to this report will be cited for details of sampling, administration, scoring and complete statements of questions asked.

Use of Televotes in Educational Decisions

The nine televotes held during the seven-month demonstration included thirty specific questions about fourteen issues. Excluding the issue evaluating televoting itself, the other thirteen issues divide easily into two groups: those on which school officials were currently planning policy or methods of implementation, and those on which no official planning effort was underway. Of the seven issues which related to current official planning, televote results have so far apparently had impact on four, as follows:

1. Vocational courses. The San Jose Regional Vocational Center serves six school districts in the San Jose area by providing part-time educational preparation for specific occupations or job families. A few months before the televote demonstration began the districts had decided to expand the vocational offering by several courses. A market analysis had been completed on a sizeable number of occupational areas to be sure job prospects would be favorable for graduates. This resulted in a narrowing

down of the number of candidate courses to the fourteen shown in Appendix A (Page A-5 and A-6). A survey of high school sophomores had indicated their preferences among these courses but no data were available concerning preferences of parents and other citizens. In late October, 1973 the Center Director, Rod Clendenen, asked about a televote to help in their planning. Because of the magnitude of the decision, the issue was given priority and within three weeks the televote had begun. Two weeks later the results were in the hands of Center planners and had a significant impact on the choice of courses. Six of the fourteen courses were ultimately recommended for inclusion in the new program and the six were unanimously accepted by all participating school districts. Of these six courses, four were among the five most preferred by televoters. The SJUSD school board inquired as to the degree of agreement between the recommendations and the televote results before making its decision. In a later conversation Clendenen reported that the televote had been "extremely valuable" in their planning. He was impressed with the fast efficient way it provided results on short notice and felt the system would be generally useful for other planning purposes.

2. School hours. During the demonstration Daylight Savings Time was extended throughout the winter for the first time and there were many complaints from citizens about the students having to go to school in the dark or about the inconvenience of moving the schedule later to obtain more daylight. At the suggestion of citizens and the concurrence of the Committee a televote issue on preferred school hours was presented as shown on page A-19 of Appendix A. School officials at both the district and school level are now planning recommendations for next winter based upon the results of this televote. At the high school level the decision will not be simple since parents and students tended to disagree as to preferred starting time, but it is clear that televote results are being considered in the decision process.

3. Reporting student progress to parents. The eighth televote agenda permitted each high school area to select an issue of its own, if it desired, in addition to the district-wide issue on school hours. Pioneer High School staff in conference with an AgenCom subcommittee decided to have a televote on methods of reporting student progress to parents. The Principal, Ralph Sleight, reported that the results bore directly on their plans for introducing a new program which assigns teacher-counselors to individual sophomore students for the purpose of guidance and coordination with parents.

4. NOW, the District newsletter. The SJUSD Public Information Officer, Gerald Weltzin, and the Editor of the District Newsletter, Robert Bobbit, initiated a televote involving a series of brief questions regarding the content and distribution of the District newsletter and ratings of its value. Rating results were favorable enough to encourage continuance of the newsletter and televoter preferences regarding content resulted in specific changes in the planning of contents to be included in next year's newsletter.

The other three issues related to current official planning had no apparent impact, probably for diverse reasons. In one case a junior high school initiated the televote and was about to take action based on the results when a district-wide budget decision took the matter out of their hands. In another case the televote issue arose after plans were well along and results may have been ignored because they did not clearly support those plans which had already been carefully negotiated between the Board and teacher organizations. In the third case AIR staff failed to provide effective liaison between key school officials and the Agenda Committee.

The remaining six issues were initiated by students, staff or citizens who felt that the schools should change their policy or programs in these areas and hoped that the televote would bring this to the attention of the appropriate authorities. It may be too early to make final judgments about the eventual effects of such televote results, but as yet there seems to be no tangible impact on district policy or decisions as a result of those televotes not initiated in connection with official planning for a specific decision.

In summary, four televotes had tangible impact on educational planning in the District. Other issues did not have any immediate impact on specific decisions and may or may not affect future planning. School officials who used televote results typically had taken a leading role in defining the issue for televoters. This suggests that giving officials more freedom to define issues as they see fit would increase use of results. Such a change would require especial attention to whether all sides of an issue supporting reasons were stated fairly. Planners might be tempted to use the system to

propagandize rather than to encourage citizens to weigh all relevant factors and make a judgment in the public interest. What procedure is needed to insure both fairness and maximum use by official planners? This is a key question as yet unanswered. One approach is to be sure citizens representing all major viewpoints work in close liaison with official planners throughout the planning process, from initial definition of the issue through use of televote results and other information in decisions.

Responsive decisions. A long-range aim of a televote system is to make public decisions more responsive to the desires of the constituency served. We assume that any government agency has room for improvement in this regard. Whether any progress was made in this direction in this brief demonstration is difficult to say. Citizen agreement with specific school decisions was not assessed because the time lag between televotes, official decisions, and citizen reaction to these decisions was too long for the two-way cycle of feedback to be completed during this demonstration. The fact that nearly all recommendations and decisions based partly on televote results were consistent with those results generally suggests that the televote system encouraged responsiveness in official decisions. We cannot be sure that the decisions would have been less responsive without televoting, but the fact that televotes often gave school officials new information at least provided them better opportunities to be responsive. The number of complaints received by certain school authorities was recorded for one month before the demonstration and one month near the end; there was no significant decrease in the number, but this record was too brief and the process too variable for the result to be conclusive.

A system such as televoting which makes discrepancies between citizen and official views public should encourage public explanations of those decisions which are contrary to popular opinion, or discourage such decisions where they cannot be so justified. And indeed there was an increase in references to public opinion in Board and staff meetings, as will be discussed later. However, the demonstration did not provide a clear instance of a decision contrary to majority opinion. Perhaps the issue that came closest was the vandalism issue on which televoters

expressed a preference for having students work or in some manner pay for damages for which they are responsible. The results were discussed at meetings of all elementary and secondary principals in the District. Some were already implementing such a policy in their own schools. Others had tried such a policy and dropped it because the staff supervision required was too burdensome, a factor not mentioned in the televote issue. The group's informal decision not to change current policy was contrary to televote results, and some of those principals having set such a contrary policy did explain the reasons and justifications for their decision to other staff present. It is not known whether any of these explanations reached parent groups, students or the general public.

An important long-range criterion for the success of a civic communication system is its effect on the quality of public decisions made. Measurement of decision quality is extremely difficult unless the acting agency has clearcut, specific objectives, which most public agencies do not. The large investment required for such measurement did not seem justifiable here in view of the brevity of the demonstration. Future research to evaluate impact of a civic communication system over a period of five to ten years should address this criterion, however.

Citizen Participation

About 5,500 persons voluntarily registered to become televoters, over 90% of these registering during the first half of the demonstration. Systematic efforts to solicit televoters were dropped midway through the demonstration. We felt that the number obtained was sufficient for a demonstration and that the remaining resources should be concentrated upon definition of issues, use of results and evaluation.

On the average, about 15% of the registered televoters participated in any given televote. The number of valid televotes counted by computer varied from 547 to 988 (exact numbers are shown for all issues in Appendix A), with the exception of the goals televote on which only 209 were counted. However, this was a televote on which far the greatest number of equipment errors

were detected. On other televotes equipment errors and human errors were estimated to number 50 to 100 per televote. The estimated number of televoters responding on each of the nine televotes in chronological order is shown by the dashed line in Figure 1. The number of valid televotes actually counted by computer is shown by the solid line.

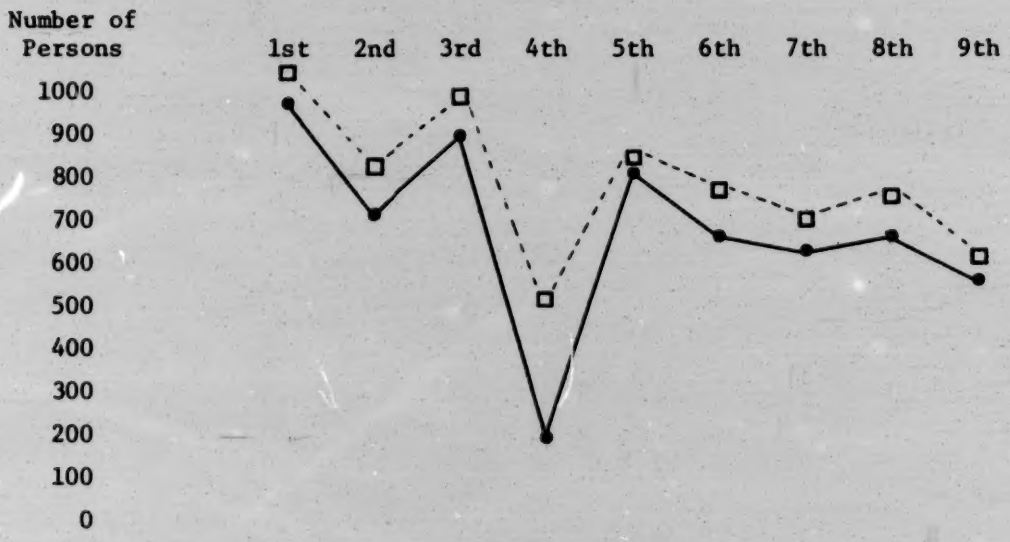


Figure 1. Number of Persons Televoting

It is difficult to separate the content of televote issues from the time and order in which they occurred, as they affect rate of participation. There were no highly controversial issues involved, as it turned out, and we have no reason to believe that there was a systematic tendency for interesting issues to occur early or late in the demonstration. Generally it appears that after some initial fluctuation the level of participation stabilized at around 600 per issue. Participation was a little higher in the early televotes, and it is not clear from the data whether the downward trend is still occurring at the end of the demonstration or whether

the small differences among the last four televotes are merely fluctuations due to content and other local conditions. Competition among activities generally increases toward the end of the school year and televoting may have been affected slightly adversely by the seasonal pattern.

The requirement to register probably prevented participation by a large number of citizens who did not wish to bother even to that extent with something they knew so little about and which might not work anyway. The pilot study and the seven-month demonstration both involved registering a random sample of citizens and sending them a televoter card and issues unsolicited, as part of our evaluation design. We estimate the percent of these samples who televoted to be roughly 10%, which is about five times the 2% of the total eligible population who voluntarily registered and televoted. From this it appears that the requirement to register voluntarily may have reduced the participation rate to as little as one-fifth what it might have been were everyone automatically registered and informed of issues.

About 95% of the registered televoters live in the demonstration district (SJUSD). 34% are students, 54% are parents of students, and 5% are District employees. Approximately 56% of the registered televoters are female, and this percentage is almost the same for all ethnic groups. The proportion of registered televoters who are Mexican-American (11%) is smaller than the proportion of SJUSD residents who are Mexican-American (25%). The percentage of registered Mexican-Americans who actually televoted was also disproportionally small in comparison to other ethnic groups. Native language was not the obstacle because all information on televoting was disseminated to Mexican-American televoters in both English and Spanish. Differences in literacy rate may have been a factor however. Clearly engaging this cultural group in such a communication system and maintaining their participation is a challenge.

There was a great disproportionality of registration among the five high school drawing areas of the District, with the majority of televoters coming from the three southernmost high schools and the fewest from the central city area. Table 1 shows the distribution of registrations for each high school area broken down by ethnic group.

Table 1. Number of televote registrations by high school area and ethnic group

High School Area	Mexican-American	Anglo-White	Black	Other	Unknown	Total	Approx. % Students
Leland	18	1488	8	67	12	1593	35%
Lincoln	124	322	11	42	21	520	52%
Pioneer	23	773	4	31	11	842	6%
San Jose	269	186	31	101	24	611	69%
Willow Glen	47	1092	13	62	30	1244	43%
Outside SJUSD	12	213	11	14	3	253	
Unknown	178	679	20	49	37	963	
Total	671	4753	98	366	138	6026	

The ratio of students to adults registered varied greatly among high school areas (right column of Table 1), as did the ratio of high school to junior high students. However the figures comparing students to adults are only rough estimates since students sometimes completed adult registration forms and vice versa.

It is estimated that at least half the registered televoters participated in one or more televotes. What proportion of the remainder were simply not interested and what proportion lost their televoter cards or declined to participate for some other technical reason is not known. However the random sample of 84 televoters followed up near the end of the demonstration gave some basis for estimating; 30% did not currently have a televoter card, though 3/4 of this number did remember receiving one in the mail. This suggests that loss of cards is a significant factor, reducing participation by perhaps 20% to 25%. Still these data do not discriminate between intentional and unintentional loss of cards.

Clearly the seven-month demonstration of the system did not spark a revolution of citizen participation. Nor was the system entirely ignored. Rather it appears that over 3% of the eligible population of the District were intrigued enough by the system to register and 1% to participate on a fairly regular basis.

We have no precise figures on how many residents were reached by televote information through schools, the press and media. A reasonable guess might be 50,000 to 75,000 in which case the percent of those contacted who responded is around 10%. Is this good or bad? It is lower than the percent of registered voters who vote in school elections (25% in the last school election in SJUSD), but then voting has been around for a long time and has the force of law. Furthermore, the percent of all eligible adults who vote in school elections is closer to 10% than to 25%. Perhaps a better comparison is the number of citizens who make inputs to the planning decisions which school officials consider from month to month. By this standard the number of televote participants is many times larger than the traditional number of participants. How much effort could be invested in seeking higher rates of participation is discussed in the "Conclusions and Recommendations" section. The principal advantage of engaging larger numbers of people in the system is that their collective advice might have more clout. That is, the larger the number of people who participate the more influence their participation may have on public decision-makers.

Agenda Committee. The televote system is designed to encourage participation at different levels of effort depending upon the citizens' motivation regarding a particular issue. Televoting requires only minutes, while serving on an issue task force or the Agenda Committee can involve hours, days or weeks of time. And it is important that citizens as well as public officials join in the effort to define issues if the statement of issues is to be responsive to citizen concerns and viewpoints. Participation at this greater level of effort was substantially more difficult to maintain, once initiated, than was the habit of televoting. We had anticipated a stable Agenda Committee of 15 to 20 members supplemented by temporary task forces which came and went as issues changed. But in fact Committee members also came and went as issues changed. A handful of individuals including citizens, school officials and students attended regularly, and some put in substantial effort. But a majority of Agenda Committee members attended fewer than half the meetings. Their contirubtions were no less valuable when they did attend, and perhaps it is not essential that Committee

membership be stable as long as those persons attending substantially represent the major viewpoints of the community and can perform Committee functions efficiently. Informal conversations with Committee members throughout the year confirmed that nearly all believed in the importance and potential usefulness of the system and the Committee's role in it, but they were torn between many competing activities, at least some of which were no doubt of greater personal urgency.

Of the educational constituencies represented on the Committee, school officials probably attended the most regularly. There were nearly always students in attendance, but which students attended depended to a great degree on the location of the meeting which was shifted among schools from time to time. Transportation to meetings was a practical obstacle for most students. Parents and other adult citizens were the least well represented group on the Committee. Average attendance at meetings was in the range of 8 to 10 persons, with typically only one parent attending.

In this demonstration the Committee had major responsibility for defining most issues, which required weekly meetings during the first half of the demonstration and only a few meetings thereafter. Meetings averaged one and one-half hours in length and were chaired by the AIR project director. Some members suggested that perhaps too much time was spent in editing issue statements, even through an attempt was made to assign detailed editing to staff or subcommittees when possible.

Changes in Basic Attitudes and Communication

The televote system was one of many factors which could influence other kinds of citizen-school communication during the 1973-1974 school year. Some of these other factors, such as building programs, new laws on spending, changes in school personnel, and the progress of one's own child in school probably have much greater impact on citizen attitudes than any new communication system could. Still we hypothesized that the televote demonstration might have noticable impact on certain kinds of communication behavior. In particular we examined citizen awareness of school issues, frequency of communicating with schools, and attitudes about citizen participation.

Data collection methods. In order to assess changes in attitudes and communication behavior it was necessary to give all instruments used for this purpose twice. Every measure was administered in April or May of 1973 as a pretest, and again one year later in April or May of 1974 as a post-demonstration test. The first four of the six instruments listed below were given as a pretest and posttest not only in the demonstration district (SJUSD) but also in a nearby school district of comparable size and social makeup where televoting was not introduced. By comparing changes in the demonstration district to those in the control district we were able to distinguish changes which might be attributed to the televote demonstration from those which were taking place in the metropolitan area because of other factors occurring at the same time.

1. Citizen home interview survey. (Appendix E) Both pretest and posttest versions of this structured interview contained sixteen questions related to school communication. The pretest version also obtained background information on age, education, registered voter status, income, sex, ethnic group, parent status and length of residence. The posttest version included several questions about the televote system itself, results of which are discussed in the next section of this report ("Direct Evaluation of the Televote System"). The questions on televoting were asked after the questions on basic communication so that discussion of televoting could not bias responses about basic communication behavior. The survey was administered to 800 adult citizens in the demonstration district and 400 in the control district in the pretest. The samples were stratified two-stage samples in which citizens were sampled randomly from census block groups in the second stage. All interviews were conducted by trained interviewers and a 20% sample of interviews was later verified to insure proper procedures. Spanish-speaking interviewers were provided where needed. To provide a more sensitive measure of change, the posttest was administered only to the same sample of citizens who had taken the pretest. Posttest interviews were obtained from 450 of the pretest respondents in the demonstration district and 190 in the control district. The results shown for each question in Appendix E include only those respondents who provided both pretest and posttest data.

2. Communications received by schools. (Appendix F) A sample of administrators and their secretaries from the district office and two high schools in the demonstration district, and a similar sample from the control district, kept tallies of communications received for a period of four weeks. Phone calls, visits and letters were tallied individually on a specially provided form. Type of message and type of sender were also noted in each case. The same data collection procedure was followed in spring of 1973 and spring of 1974. Results were analyzed only for those persons providing data in both years, who numbered eight in the demonstration district, and seventeen in the control district.

3. Meetings observed. (Appendix G) During the five weeks beginning April 5, 1973 two school board meetings and three district staff meetings were observed by trained AIR staff in the demonstration district and the same numbers and types of meetings were observed in the control district. The same procedure was repeated in the spring of 1974. All references by speakers to the viewpoints of other citizens were recorded, as were agreement of the speaker's stand with the citizen opinion referred to, and whether the speaker gave a reason for his or her stand. Frequencies of each of these types of behavior were counted.

4. Faculty questionnaire. (Appendix H) A brief questionnaire regarding communication among parents, students and faculty was administered to a random sample of 86 faculty members, half from the demonstration district and half from the control district in April 1973. The same procedure was repeated with a new independent sample of 62 faculty members drawn in the same way in April 1974.

5. Student questionnaire. (Appendix I) In the demonstration district but not in the control district a brief questionnaire similar to the faculty questionnaire was given to 288 juniors sampled by selecting heterogeneous classes from each of the high schools. One year later a new sample of 183 juniors drawn in a similar fashion was administered the same questionnaire. The questionnaires were administered by the regular classroom teachers.

6. County telephone survey. (Appendix J) Two questions from the citizen home interview were also included in a countywide telephone survey administered to 1482 randomly selected voters in March 1973, and again to 1388 randomly selected voters in March 1974.

For each of the instruments listed above the percentage of respondents giving each answer or type of answer is shown in the Appendix beside a verbatim statement of the question. Data from the citizen home interviews and student questionnaires were punched on cards and analyzed by computer. Analyses of the county telephone survey were performed by Diridon Research Corporation, which also collected the data for both the county telephone and home interview surveys. Major results from analyses of the above data are summarized below. References to a "significant" difference here mean the probability of such a difference occurring by chance was less than .05.

Frequency of communication. Answers to a series of home interview questions about phone calls, visits and letters to schools indicated that the number of citizens communicating to the schools by conventional means decreased slightly in the demonstration district and increased slightly in the control district during the year of the demonstration. This change occurred only in the predominantly white suburbs and not in the central city areas. Since the suburbs also supplied most of the televoters, this area difference tends to support the interpretation that televoting may have substituted for some other kinds of communication in the demonstration district. The communication counts kept daily by school officials did not confirm this finding in that no significant difference between years or between districts was found in these counts. However, we were not able to standardize the recording of incoming communications in a satisfactory manner, and the lack of a demonstrated difference may simply reflect the variability and unreliability of that particular data collection method.

The number of meetings which citizens reported attending showed a difference between districts consistent with citizen self-reports on communication. That is, the number of meetings attended remained about the same in the control district but dropped about 20% in the demonstration district during the year of the demonstration. However, the number of people attending one or more meetings did not show the same pattern. The number of people remained about the same in SJUSD (20% to 21%) and decreased slightly in the control district (32% to 27%). This suggests that televoting did not decrease the number of people attending meetings but rather the number of meetings attended by a given person.

We must take care not to exaggerate the extent to which televoting may substitute for traditional communication. Citizens who have heard of televoting and tried it still contact the schools by phone, visits, letters and meetings significantly more often than citizens not involved with tele voting.

When school board and staff meetings were observed, the AIR observer recorded two general kinds of events:

1. References by the speaker to public opinion, whether the opinion of an individual, a group, "most people", a survey or any other kind of reference to outside opinion on the issue currently being discussed. From spring 1973 to spring 1974 the number of such references per hour of meeting time increased from 4.2 to 7.7 in the demonstration district and from 2.1 to 2.8 in the control district.

2. A speaker's explanation of how his or her own stand agreed or disagreed with public opinion, as defined above, or a reason given for this viewpoint. When all instances of explaining own stand and giving reasons were combined, the number per hour of meeting time increased from 2.7 to 3.2 in the demonstration district in a year's time, and decreased from 2.1 to 0.5 in the control district.

The difference in gains between districts is not quite significant statistically for references to public opinion (#1), but is significant for explanations of own stand (#2). The differences should be taken lightly in any case because of some degree of unreliability in scoring, the small number of meetings observed, and the great variation among meetings in behavior of this kind. To the extent that such differences are meaningful they suggest that the televote demonstration was associated with increased official consciousness of public opinion. Whether televoting was the cause of such a change is less certain.

Attitudes toward communication. In both the home interview and the county telephone surveys the following two questions were asked:

> "How interested do you think the local school district is in your opinions?" (Very interested; Somewhat interested; A little interested; Not at all interested.)
>
> "Should the local school district ask citizens for their opinions before making policy decisions?" (Yes, No, Other.)

The number of citizens in the suburban neighborhoods of the demonstration district who chose either "very interested" or "somewhat interested" in answer to the first question increased from 47% on the pretest to 62% on the posttest, while in the control district suburbs the percentage remained at about 52% both years. No such difference between districts was found in the central city neighborhoods, but both central city areas registered an increase of 8% or more in perceived school interest in their opinions even though the countywide survey showed no significant change from one year to the next. The fact that the demonstration district advantage occurred only in the suburbs suggests that televoting may indeed have been the factor which improved the schools image of being interested in citizen views, since a great majority of televoters were also in the suburban neighborhoods.

Regarding the second question above, the great majority in both districts and the county as a whole feel that schools should ask citizens their opinions before making policy decisions. In the demonstration district the percentage rises from 78% on the pretest to about 85% on the posttest and the percentages are similar for the control district and the county as a whole.

Citizens in the home interview were asked whether they agreed with each of the three statements below:

a. "I don't think public officials care much what people like me think."

b. "Citizens don't have a chance to say what they think about running the government."

c. "Sometimes politics and government seem so complicated that a person like me can't really understand what is going on."

Citizens of the two districts did not differ significantly in their responses to these statements. About equal numbers tended to agree and disagree with each of the statements. Thus it appears that while the televote demonstration may have had an effect on attitudes toward communication with the schools, the effect did not generalize to government as a whole. This is no surprise. School is only one of many governments which affect citizens' lives, and in fact many citizens do not even think of schools as a type of government.

Regarding adequacy of communication among teachers, students and parents, the faculty questionnaire results showed no differences between districts. Combining both districts however, the percent of faculty who felt teachers have adequate means to communicate with parents rose from 50% in 1973 to 73% in 1974.

Results from the student questionnaires also remained the same from one year to the next in the demonstration district. Most students felt their views were either "sometimes" or "rarely" considered in school decisions, and 86% felt their views should be given more consideration. Herein lies a fertile field for improvement of communication and rapport between students and staff. Students could play an important part in the televote system by defining and researching issues, liaison among officials, publicizing results and their effects, and mobilizing students and other citizens to communicate their views. The surface of potential student involvement has barely been scratched. Students did initiate one of the televote issues but were frustrated in two other attempts. Several social studies teachers cooperated in seeking student involvement and succeeded to some degree. However, major involvement in the system requires a great deal of advance planning and administrative arrangements to make such activities a regular part of the curriculum, more than could be achieved in this initial demonstration.

Awareness of school issues. In the home interview citizens were asked to think of local school matters that interested them during the previous school year. Demonstration district residents named a significantly larger number of issues than control district residents in the posttest interview even though there was no difference in the pretest. Put in a different way, the demonstration group gained significantly from 1973 to 1974 in mean number of issues named (0.97 to 1.20) while the control group did not (0.87 to 0.89). The demonstration group also gained significantly more than the control group from 1973 to 1974 in number of named issues related to televote issues. In fact, the increase in total number of issues named exactly matches the increase in televote issues named, which strongly suggests that televoting was the cause. This result is probably mainly accounted for by the fact that we decided to automatically register all of the demonstration district home interview samples who could be reached by mail in early March 1974. Omitting the Willow Glen area which had previously taken part in the pilot study, the remainder of the demonstration district sample received information on the last four televotes. This was no doubt the key factor in increasing awareness of school issues related to televoting. Certainly we could have expected no such effect on the sample without such intervention since only seven had previously voluntarily registered to televote. Nevertheless it is encouraging to find that citizens did read the televote information and retained for a matter of at least several weeks their increased awareness of school matters.

The March televote included a question as to whether high school students should have more educational experiences outside the classroom, such as field trips and community projects. Supporting reasons pro and con were presented as part of the issue. This same question was included in the home interview survey in both years, but without any supporting information on reasons pro and con provided. Instead, respondents were asked to think of good reasons both for and against having students spend more school time outside the classroom. The answers they gave were divided into two groups: those reasons mentioned in the televote issue and those not mentioned. The demonstration district sample named significantly more reasons that were mentioned in the

televote issue than did the control group. They also mentioned at least one reason for and one reason against significantly more often, suggesting that televote information does have the intended effect of getting citizens to consider the arguments on both sides of an issue. The televote issue was presented four to six weeks before the home interview survey and the results disseminated two to four weeks before. These results generally verified that televote information probably increased citizen awareness of school issues.

Citizens in the home interview sample and students who completed questionnaires were given a list of seven educational goals and asked two questions. First they were to choose the goals which they thought were most important and second most important for young people to learn. Second they were to estimate which goals other people in their community would choose. As a further measure of the effect of televote results we noted whether the goals they thought the community would choose were in fact chosen by televoters on the goals televote issue, results of which were publicized two to three months before the posttest interview. Adults in the demonstration district showed a significantly higher correspondence between their own estimates and televote results than did adults in the control district. And high school juniors' estimates corresponded to televote results significantly better than did adults' estimates.

The hypothesis that participation in the televote system, even involuntarily, would lead to greater awareness of school issues appears to be confirmed from several sources.

For most of the above variables dealing with communication behavior and related attitudes and knowledge, socio-economic status variables tend to correlate with greater communication and more positive attitudes. For example, amount of education, income, and suburban residence tend to correlate positively with more communication and favorable attitudes. In addition, females and young adults tend to be more involved in communication than males and older adults.

Direct Evaluation of the Televote System

The dimension of evaluation which is probably most critical in terms of future public support of a televote system is the direct reaction of citizens and staff to the system itself. In addition to those comments provided by school officials who used televote results directly in their planning, direct evaluations of the televote system were obtained by five other data collection methods:

1. Citizen home interview posttest. (Appendix E - Questions number 17 to 23) The home interview survey administered to a sample of adult citizens in the demonstration and control districts, as described above, included several questions about televoting in the posttest. The interviewer first read a 20-second sketch of televoting and asked if the respondent had heard of it. In the control district they were next asked if they would be interested in trying it or not, while in the demonstration district they were asked if they had tried it, and if so, what specific experiences and reactions they had had. Finally, all respondents in both districts were asked how much they would be willing to pay per year to have a public televote system in San Jose. The choices were: nothing, 25¢, 50¢, $1.00 and $5.00 up.

2. Televoter interview. (Appendix K) A random sample of 133 registered televoters was drawn and an interview conducted by telephone with the 84 who could be located. In a few cases it was necessary to go to the home to conduct the interview. All questions concerned televoting and specific strengths, weaknesses or obstacles to participation.

3. Televote on evaluation of televoting. (Appendix A, last issue) A total of 547 televotes were counted on this issue, 385 of them from parents.

4. Postcard survey on goals issue. (Appendix L) Response to the fourth televote concerning educational goals for students was much lower than on the previous televotes. In order to learn why this happened, a prepaid postcard survey was conducted with a random sample of 310 registered televoters. The card presented several different reasons which may have prevented televoting and the respondent marked those which applied. Of the 167 persons who responded, 99 were parents, 46 students and 22 other citizens.

5. Post demonstration staff interview. A sample of 20 administrators and teachers representing a variety of different kinds and degrees of involvement in televoting

were interviewed individually by the AIR project director. In addition to evaluating strengths and weaknesses of the televote system staff were asked what other kinds of planning they had undertaken during the current year and what kinds of information needs they had experienced in their planning. Respondents included the superintendent, 2 assistant superintendents, 2 other staff members in the district office; 7 school principals, 5 teachers, 2 student members of AgenCom, and 1 parent who organized two local televote issues.

Overall value of televote system. On the last televote 84% of those responding answered that the televote system had helped keep them in closer touch with school district planning. By comparison 73% of the random sample of registered televoters interviewed said televoting would keep people in closer touch with schools, and 86% gave a favorable response to the question, "What do you think of televoting?"

Of the 20 SJUSD staff interviewed, 6 did not volunteer an overall evaluation, but 13 of the other 14 gave the system a favorable evaluation. The last 17 staff members interviewed were asked if they thought it was worthwhile to continue developing the televote system in San Jose. No one was simply against it. One person gave it low priority, four said it should be continued only under certain circumstances, and twelve said the system should go ahead. Specific advantages named by citizens and staff included the ease of televoting in terms of time and effort, the speed and economy of getting public feedback on planning issues, the fairness of the statements of alternative views, the interest it stimulated in certain issues and the opportunity it gave citizens to directly influence important decisions. The disadvantages named included not knowing why citizens chose the answers they did, too narrow representation on the Agenda Committee or the the televote sample, and equipment malfunctions.

Televoters and the random sample of citizens interviewed at home were both asked about their interest in future participation in televoting. 95% of the registered televoters interviewed said they would be interested in televoting next year in a system which included other governmental bodies as well as the school district. After a 60-word description of how televoting works, a subsample of 76 citizens in the control district were

asked whether it sounded like something they would be interested in trying; 14% said yes, and 82% gave a conditional answer such as "Maybe" or "It depends".

A total of 608 citizens in both demonstration and control districts were asked the key question, "What is the most you would be willing to pay per year to have a public televote system here in San Jose?" The results are shown in Table 2.

Table 2. Percent of citizens willing to pay different amounts for a televote system

Amount willing to pay	School District	
	Demonstration	Control
Nothing	29%	22%
25¢ or more	51%	49%
50¢ or more	32%	33%
$1 or more	29%	30%
$5 or more	4%	14%
Declined answer	20%	27%
Total number of respondents	407	201

Interestingly, citizens in the control district were willing to pay as much as citizens in the demonstration district. This suggests that citizens are more impressed by the potential value of televoting than with the accomplishments of the current demonstration. We find this perspective very sensible. Televoting could work a profound change in government by bringing many more citizens into the planning process efficiently, and what we demonstrated in SJUSD was the bare beginning of such a system.

Of the 80 randomly chosen registered televoters who answered the same question, 73% were willing to pay at least 50¢, and the mean amount they were willing to pay was $1.19. The results were quite similar on the televote

evaluation of the system. Two-thirds were willing to pay 50¢ or more, and the mean amount they were willing to pay was $1.07.

If we assume that those who declined to answer the question would pay nothing, the mean amount of money that the citizen sample was willing to pay per year was 62¢, which is more than enough to finance the system if paid by all adults through taxes. Considering the fact that people who do not respond to surveys are usually less involved in community activities, this 62¢ figure should probably be adjusted downward a little for the purpose of estimating total tax revenue which residents would be willing to provide at this time. After such an adjustment the amount of money would probably still be ample.

According to the current cost estimates, the amount that would be needed to support a televote system such as the one demonstrated is about 25¢ per adult resident per year in a community of 200,000 adults. The cost per adult would be a little less in a larger city and a little more in a smaller city, since some costs are constant (e.g., computer programing). If the system were shared by several agencies the cost per agency would be smaller, of course. A detailed breakdown of projected operating costs is shown in Appendix M. Compared to other means of two-way communication between citizens and government, televoting becomes most cost-effective as the number of participants grows larger. If 10,000 persons televote on 12 issues in a year, the estimated cost per televoter per issue would be about 40¢, which is about half the cost of a legal election. Most of this 40¢ goes for personnel to manage and operate the system. The cost per additional issue beyond 12 is estimated to be only 20¢ per televote.

Machine-readable cards may prove to be even more economical than the telephone-computer link as a method of televoting,[27] especially for smaller communities. The main cost of such a method is postage and the main disadvantage is the delay of return mail.

Awareness of the system. About 6% of the demonstration district citizens who heard the televoting system described by the home interviewer said

they had heard of it before. In the control district 21% of the citizens claimed to have heard of televoting before. Apparently the mass media and informal communication channels spread word of the televote system beyond the demonstration district. About 15% of the demonstration group said they had tried televoting at least once. It should be remembered, however, that all these citizens were sent televoter cards and televote information on at least three issues without requesting it.

Televote issues and information. 99% of the registered televoters interviewed had received some televote issues either in the mail or through the SUN newspaper. 86% thought at least some of the issues were interesting and 81% thought the amount of information presented was about right. High percentages also found the televote results understandable (89%), interesting (84%), and believable (87%). On the last televote of the demonstration 4% of the televoters indicated that televote issues gave too much information to read, while 14% indicated that not enough information was provided. On the goals issue, which drew the lowest response of all televotes, the postcard survey (Appendix L) indicated that the three most common reasons for not responding were: "I didn't have time to read the issue" (24%), "The issue was too long or too confusing" (24%), or "It was too hard to choose answers, or the wrong questions were asked" (21%).

The one televote on which three high school areas each had a televote issue unique to the local area drew a proportionally larger number of televotes from those areas than from the other two high school areas, even though the amount of information which the televoter had to read was three to four times as great. This suggests that in the future use of the system, educational issues which originate from local school areas may draw greater citizen interest in that area than district-wide issues. It was also suggested several times that larger state and national issues might attract more interest and participation.

Opinions on use of results. In the televote evaluating the system televoters were asked what disadvantages they saw in televoting so far. The one named substantially more often than any other was that school officials

may not take televote results seriously enough (38%). By contrast only 4% thought school officials might be too swayed by public opinion. These figures agree fairly closely with those provided in interviews of registered televoters, of whom 65% thought school officials would use the results, 13% thought they would not and 22% didn't know. Actual use of the results during the demonstration varied from direct use on a $3,000,000 decision to no action at all, with many intermediate degrees of use, as discussed earlier. When SJUSD staff were interviewed they indicated which televote issues they were familiar with. They were then asked if they knew whether televote results had been considered by school officials in connection with each of these issues. There were 18 "yes" replies and 21 "no's". One assistant superintendent thought televote results would not be useful unless a common frame of reference was shared by citizens and public officials, which would require more information and communication than was provided during the demonstration. Others suggested that greater use would be made of results if school officials were given a freer hand in defining their own issues, with the Agenda Committee playing a less definitive role. Other individual suggestions made were: that an inservice workshop on planning and information use be held; that officials be held more accountable for use of televote results; and that on each televote a smaller sample of citizens be interviewed to learn in greater depth why they chose certain answers.

When officials were asked about other (non-televote) issues that had been important in their planning during the previous year a great variety of needs and concerns emerged. The views of staff and students were usually adequately considered in these issues, but about half of the respondents expressed a need for more information on parent views. Some of these volunteered that televotes would be quite useful for this purpose. Staff members were asked what other kinds of information besides viewpoints were needed or used, and the most frequent type mentioned was information from other local educational agencies and the State about their specific programs, personnel and related local matters. Mentioned about equally often was the need for internal data about SJUSD or particular schools in the district. The only other type mentioned by one person was the need for a consultant of a certain kind. No one cited a need for or use

of research studies or conceptual articles. When asked if they were satisfied with the present state of communication about school matters in the district, 3 said yes, 7 said it was okay but needed improvement, 6 said no, and 4 gave replies not easily classified.

The sample of registered televoters interviewed were asked "What can be done to make televoting more appealing?", as an open-ended question. The most common answer (13%) was to get more coverage of televoting in the media. The next most common answer (7%) was to show that televote results were being used or had impact in some way.

Televoting equipment and procedures. "Equipment and telephone problems" was an alternative answer chosen by 27% of the televoters who were asked what disadvantages televoting had so far. The frequency of mechanical troubles was similar among the other samples interviewed. Twenty percent of the registered televoters interviewed had experienced some kind of difficulty in dialing, 16% of the random sample of citizens who had televoted had experienced such difficulties.

There were several malfunctions in the equipment which gave just cause for complaint. These included equipment breakdowns which caused the automatic system to be down for anywhere from a few hours to two days at a time, occasional busy signals, and the electronic switching problem discussed below. In addition, the dial decoder caused errors in about 10-15% of the dialed votes. This error rate is too high to be acceptable in the long-run, so the equipment has since been modified by adding a device which adjusts the sensitivity of the signal detector to the amplitude of the incoming signal. Recent field tests indicate that the decoding errors are virtually eliminated by this improvement.

For over a year we have been seeking telephone company cooperation in solving the electronic switching problem which requires voice votes (instead of dialing) from about 20% of the phones in the San Jose area. So far we have not obtained approval of a feasible solution. The company understandably wants to avoid costly modification of its basic equipment which is standard throughout the country. Two other technically feasible solutions are being

proposed. One is to provide the televote system a unique prefix and transmit televote calls from each office by a dial dictation trunk. The other is to provide touch tone phones at regular dial phone rates (to charge the subscriber an $1.50 per month amounts to a poll tax). If televoting becomes a metropolitan communication system serving the major governments of the area, perhaps the telephone company will find one of these solutions merits approval as a public service.

The only feedback televoters got confirming that a televote had been registered was resumption of the high-pitched tone after each number was dialed. Voice confirmation by tape, or some type of feedback verifying that the numbers dialed were accurately recorded, would be desirable if the cost can be kept feasible.

A computer program to verify the identity of most registered televoters through use of the school computer tapes was partially developed but not actually implemented during the demonstration. Instead, a random sample of 100 registered televoters was contacted by telephone or mail (Appendix K), partly as a basis for estimating the extent of possibly fictitious televoters. We were able to verify the existence of 97% of those sampled by these simple methods. The other 3% may well also be genuine persons but were untraceable without undertaking a more intensive method of search. We therefore feel that the problem of fictitious televoters was minimal or even non-existent during the demonstration.

Summary. Direct evaluation of the televote system by users and potential users identified specific needs for improvement in every major component of the system. On the whole, though, the system was evaluated favorably by the sample of persons interviewed from every group involved, including District and school staff, televoting students and citizens, and non-participati citizens. Most importantly, citizens believe the system has enough potential value that they are willing to pay the estimated cost of regular operation of a metropolitan televote system used by schools, cities and other government agencies.

CONCLUSIONS AND RECOMMENDATIONS

The televote system is designed to give schools, cities and other government agencies new economical ways to communicate constructively with their constituents about plans, programs and policies. The first demonstration of a televote system was hosted by the San Jose Unified School District and was well received. District and school staff members, students, parents and other citizens participated in a variety of ways. Samples of all these groups were asked to evaluate the system at the end of the demonstration and a clear majority of all samples gave consistently favorable responses to a variety of questions. Probably the key question was, "What is the most you would be willing to pay each year to have a public televote system here in San Jose?" This question was asked not only of participants but also of a sizeable random sample of other adult citizens in the San Jose area. The mean amount of money which televoters were willing to pay was $1.07 and the random citizen sample 62¢. Since the annual cost of regular operation of a televote system like the one demonstrated is estimated to be about $50,000 in a city with 200,000 adults (25¢ per adult), it appears that citizens of the San Jose area are willing to pay the estimated cost of operating a televote system, whether they have been involved in the demonstration or not.

All groups questioned about their future support of televoting were first told that future televotes might include city, county, state and national issues as well as school matters. A televote system serving all major agencies in an area can operate much more economically than several separate systems in different agencies. A single multi-agency televote system could help different agencies coordinate their plans more efficiently as well. Several major governments and public institutions in the San Jose area have expressed interest in a joint televote system. A plan to this effect has been reviewed by key staff in each agency and received favorable response in all cases.

Recommendation 1: The televote system should continue to be developed and operated in the San Jose area and should jointly serve those public agencies which wish to cooperate in its use.

Several inquiries about the televote system have come from other communities outside the San Jose area, both near and far. As part of the project reported here, a document called Guidelines for a Televote System is being prepared as a way to introduce new communities to the possibilities of televoting. A total of 2,500 copies will be disseminated throughout California and the nation.

The demonstration and evaluation in San Jose have made it clear that many improvements are needed in the current televote system and important questions pertaining to its long-range success remain unanswered. Substantial further research and development are needed in order to answer these questions and evaluate the full potential of the televote system. The achievements of the system demonstrated so far have been very modest. Interviews with staff, students and citizens made it clear that their support of a future televote system is based largely on their vision of what such a system could do to improve democracy and responsiveness of government, and not just on what has been accomplished by the primitive system so far demonstrated. Research and development are needed to improve the system further. Yet school, city and county governments are in the tightest budget squeeze they have experienced for years, and are hesitant to finance a new communication system which is still in an experimental stage.

> Recommendation 2: Outside funds should be sought to support the research and development needed to improve the televote system, to test its feasibility as a multi-agency metropolitan communication system, and to answer key questions raised by the previous demonstration.

Equipment. Televoting procedures were understood and used by nearly all participants with little confusion, although misplacement of televoter cards may have reduced participation somewhat. There was some unreliability in the dial decoding apparatus, but subsequent improvements have eliminated nearly all decoding errors. Telephone company cooperation is being sought for a new equipment system which would enable all callers to dial their televotes directly.

Recommendation 3: All public agencies participating in a televote system should jointly request telephone company approval of a unique prefix for the televoting phone number so that televotes may be dialed from all phones in the area.

Other entirely different data transmission systems, such as marking and mailing machine-readable cards, are also under consideration. No commitment has been made to a particular mechanism. The key question is, "What data-equipment system will yield the most cost-effective and reliable transmission and recording of televotes?"

Use of televote results. Results of four out of fourteen televote issues had tangible effects on specific educational plans in the district. The largest single effect was on a $3,000,000 expansion of courses at the Regional Vocational Center; four of the six new courses chosen from a list of fourteen with good job market prospects were also four of the five most preferred by televoters. Three of the four televote issues having noticable impact on school decisions were defined mainly by school officials as part of their own planning. If official planners initiate a televote issue or at least modify it until the final statement suits their needs, the planners are more likely to find the results relevant to their own decisions. The main concern of televoters who evaluated the system was that school officials might not take the results seriously enough. One way to increase the likelihood of serious use of televote results is to give the potential users total responsibility for deciding what televote issues would most aid their planning.

Recommendation 4: Official planning bodies should have direct responsibility for selecting and defining those issues which will benefit their own planning.

Other citizens also need access to the issue selection process. On issues initiated by students, parents and other citizens, it is more likely that televote results will have impact if key officials who might get a policy change considered are identified in advance and involved in both defining

and following up results. Students could play a key role in helping define and research such issues and working with appropriate officials, if given credit and time for such activities as part of the regular school day. Since the number of issues suggested by citizens might be sizeable, an issues committee would play a more decisive role in selecting and defining such issues.

> Recommendation 5: An issues committee including representatives from all participating agencies and other citizens should resolve scheduling conflicts and review all proposed issues to be sure that major viewpoints are clearly and fairly presented. For citizen-initiated issues the committee should direct the selection and definition of issues.

Citizen participation. In all about 6,000 persons age 12 or over participated in the televote demonstration by registering, televoting and in a few cases taking an active part in defining and researching issues. This represents about 4% of the eligible population of SJUSD, and perhaps 10% of those who were contacted by any means and invited to participate. The average number of persons televoting on a given issue was around 700. This is a much larger number of citizen views on a specific issue than school decision-makers typically receive by tradicional methods. The potential number who might respond is much larger, of course.

District staff members were asked if engaging 10 times as many citizens in the televote system would be worth doubling its cost, and most thought it would. Important questions not answered in this demonstration are, "How much effort is required to convince larger proportions of the citizenry to participate?" and "When does such effort reach the point of diminishing returns in value to the community?"

From a statistical standpoint 700 persons is a large enough number to estimate within 3% or 4% the percentage of the actively interested population who hold a given viewpoint. For some purposes it may be better to know how the whole population (not just the active population) thinks,

and for this purpose other survey methods are more appropriate. However, most public matters are determined by those who are interested enough to participate, as in legal voting or serving on a public committee. It is reasonable to argue that those who care about an issue and take the trouble to inform themselves to some degree are those who should advise public officials. The evaluation results suggest that the televote system makes it easier for such interested citizens and officials to inform themselves and communicate with each other rapidly and constructively.

The campaign to attract new televoters was halted midway through the seven-month demonstration, and very few new registrations came in after that time. Unless the televote system and its issues get major news coverage in the media, it may well take a major intervention in the community's field of awareness to attract substantially larger numbers of televoters.

> Recommendation 6: There should be a major campaign to alert citizens as to how televoting may serve their needs, including effective use of the media, neighborhood meetings and talks with interested organizations.

Participation in televoting was far greater in the suburban areas where middle and upper socio-economic groups reside. These same suburban areas also showed the greatest increase during the demonstration year in their belief that the schools are interested in their opinions.

> Recommendation 7: Special attention should be given to minority and disadvantaged groups to encourage their participation.

To the extent that televoting depends upon reading printed information, groups with lower literacy rates may present a difficult obstacle to overcome. There should be regular provision for oral communication by telephone or in small groups wherever there is such a need. Our experience has been that for all kinds of people a person-to-person dialog in which a citizen's questions and doubts about televoting can be answered directly

is by far the most effective means thus far used to convince people the system is worth trying. But it would take years to diffuse the idea through dialog. Is there an effective substitute for dialog? We don't know. The demonstration proved that several thousand people can be attracted to try the system by fast low-cost methods. But those who are not initially attracted may be much harder to convince.

The two basic requirements for building an effective communication system are present in San Jose. Schools and other public agencies want citizen inputs as part of their planning, and citizens want them to have those inputs. 85% of the random sample of San Jose adults interviewed in this study want schools to ask citizens for their opinions before making policy decisions; and 86% of students feel their views should be given more consideration in educational decisions. Televoting is one of many tools the community may use to achieve better two-way communication. The study suggests that for some people televoting may be a convenient substitute for more time consuming methods of communication. Those who can afford the time will continue to shape the issues and work directly with the officials who implement decisions, and their efforts will of course have far greater impact than their individual televotes would. However, televoting may provide an efficient means for public bodies to communicate with more people more often without substantially increasing the number of hours an official spends in conversation, and it may represent the difference between participating and not participating for many people.

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